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LEYDIG VOIT & MAYER, LTD TWO PRUDENTIAL PLAZA, SUITE 4900 180 NORTH STETSON AVENUE CHICAGO, IL 60601-6731				THAO, CHHEAN K		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/585,288	WU ET AL.	
	Examiner	Art Unit	
	CHHEAN THAO	4172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 30 October 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-17 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 10/30/2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 06/04/2007.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) Notice of Informal Patent Application

6) Other: _____.

1. Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 35 I(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5, 7, 10-12, 14, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Bajko (US 20040196796 A1).

Regarding **claim 1**, Bajko discloses a method for ~~reducing load of Home Subscriber Server~~ (HSS)'s interface, comprising: upon receiving a request message from Serving Call Session Control Function (S-CSCF) comprising a request for a storing name of the S-CSCF and for downloading a user's subscription information, a HSS first storing the name of S-CSCF in the request message, then returning to the S-CSCF a response message comprising the user's subscription information (HSS stores user information, paragraph **0033**; HSS returns the S-CSCF name in response, paragraph **0037**).

Regarding **claim 2**, Bajko discloses the method according to claim 1, further comprising: upon receiving a request message from Interrogating Call Session Control Function (I-CSCF) for inquiring about the information of S-CSCF, the HSS returning to the I-CSCF an inquiry response message comprising the information needed for determining an S-CSCF (paragraph **0038**); according to the returned information in the response message, the I-CSCF determining the S-CSCF that has the capability to serve a User Equipment (UE) and forwarding the request message of the UE to the determined S-CSCF (I-CSCF allocates the public identities of the subscription (i.e., registration info of UE), paragraph **0042**).

Regarding **claim 3**, Bajko discloses the method according to claim 2, wherein, when a Public User Identity performs registration for the first time, if there is at least one Public User Identity of the UE requesting registration that has been registered in the HSS and the registration is still valid, and if the HSS decides there is no need for the I-CSCF to re-select an S-CSCF to serve the UE, said information needed for determining the S-CSCF comprises the name of the S-CSCF that is serving the UE (HSS returns the S-CSCF name, **paragraph 0037**)

; if there is at least one Public User Identity of the UE of which the registration status is unregistered or the registration has expired thereof but the HSS still stores the name of the S-CSCF that was used by the UE last time, or if the UE has been assigned an S-CSCF by the HSS as an unregistered party that is called, said information needed for determining the S-CSCF comprises the name of the S-CSCF that has served the UE(currently registered or not registered with S-CSCF, **paragraph 0033**); if HSS has stored the name of the S-CSCF that has served the UE and the HSS is not sure whether it is needed for the I-CSCF to re-select an S-CSCF to serve the UE, said information needed for determining an S-CSCF comprises the name of the S-CSCF that has served the UE and the S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE requesting registration (HSS maintains name and /or address of the S-CSCF, **paragraph 0036**); if the HSS does not store the name of the assigned S-CSCF that has served the UE, then said information needed for determining an S-CSCF comprises the S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE requesting registration (HSS can provide information regarding common features of S-CSCF, **paragraph 0040**).

Regarding **claim 5**, Bajko discloses the method according to claim 2, after the HSS receives the request message for inquiring the information of S-CSCF from the I-CSCF, further comprising: deciding according to the user's subscription information and the policy of the operator that the UE is permitted to

perform a registration request in the current network before subsequent steps are executed (I-CSCF initiates user registration status query, **paragraph 0038**).

Regarding **claim 7**, Bajko discloses according to claim 2, wherein, when the UE is in a session, if the HSS has stored the name of the S-CSCF that has served or is serving the UE, the HSS will, according to system configuration, return to the I-CSCF a response message comprising the name of the S-CSCF, and the I-CSCF will forward the session request message of the UE to the S-CSCF (HSS store information of S-CSCF, **paragraph 0033 and 0038**); or the HSS will return to the I-CSCF a response message comprising the information of the name of the S-CSCF and the S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE, and the I-CSCF will determine an S-CSCF that has the capability to serve the user and forwards the session request message of the UE to the determined S-CSCF(HSS returns the S-CSCF name, **paragraph 0037**); if there is no S-CSCF stored in the HSS that has served the UE, the HSS will directly return to the I-CSCF a response message comprising the S-CSCF capability information set that has the capability to meet the most strict service subscription requirements of the UE before the I-CSCF determines an S-CSCF that has the capability to serve the UE and forwards the session request message of the user to the determined S-CSCF (HSS would return the service capabilities to the I-CSCF, **paragraph 0042**).

Regarding **claim 10**, Bajko discloses the method according to claim 1, wherein said user's subscription information in the response message returned to the S-CSCF comprises at least the user profile information (HSS stores user information, **paragraph 0033**; HSS returns the S-CSCF name in response, **paragraph 0037**).

Regarding **claim 11**, Bajko discloses a method for ~~reducing load~~ of Home Subscription Server (HSS)'s interface, comprising: upon receiving a message from a I-CSCF for inquiring about the information of S-CSCF, a HSS returning to the I-CSCF an inquiry response message comprising a information needed for determining an S-CSCF (return the S-CSCF name, **paragraph 0037**); the I-CSCF

determining a S-CSCF that has the capability to serve a UE and forwarding request message of the UE to the determined S-CSCF (I-CSCF initiates user registration status query, **paragraph 0038**).

. Regarding **claim 12**, Bajko discloses the method according to claim 11, wherein, when a Public User Identity performs registration for the first time, if there is at least one Public User Identity of the UE requesting registration that has been registered in the HSS and the registration is still valid, and the HSS determines there is no need for the I-CSCF to re-select an S-CSCF to serve the UE, then said information needed for determining an S-CSCF comprises the name of the S-CSCF that is serving the UE (HSS maintains name and /or address of the S-CSCF, **paragraph 0036**); if there is at least one Public User Identity of the UE requesting registration of which the registration status is unregistered or the registration has expired, but the HSS still stores the name of the S-CSCF that was used by the UE last time, or if the UE has been assigned an S-CSCF by the HSS as an unregistered party that is called, then said information needed for determining an S-CSCF comprises the name of the S-CSCF that has served the UE (HSS keeps a record of various identities associated with the subscription, **paragraph 0036**); if HSS has stored the name of the S-CSCF that has served or is serving the UE and the HSS is not sure whether it is needed for the I-CSCF to re-select an S-CSCF to serve the UE, then said information needed for determining an S-CSCF comprises the name of the S-CSCF that has served or is serving the UE and the S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE requesting registration; if there is no assigned S-CSCF that has served the UE stored in the HSS, then said information needed for determining an S-CSCF comprises the S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE requesting registration (HSS can provide information regarding common features of S-CSCF, **paragraph 0040**).

Regarding **claim 14**, Bajko discloses the method according to claim 11, after the HSS receives the message for inquiring about the information of S-CSCF from the I-CSCF, further comprising:

deciding according to the user's subscription information and the policy of the operator that the UE is permitted to perform a registration request in the current network before subsequent steps is executed (I-CSCF initiates user registration status query, **paragraph 0038**).

Regarding **claim 16**, Bajko discloses the method according to claim 11, wherein, when the UE is in a session, if the HSS has stored the name of the S-CSCF that has served or is serving the UE, the HSS will, according to system configuration, return to the I-CSCF a response message comprising the name of S-CSCF, and the I-CSCF will forward the session request message of the UE to the S-CSCF (**paragraph 0038**); or the HSS will return to the I-CSCF a response message comprising the S-CSCF name and S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE, and the I-CSCF will determine an S-CSCF that has the capability to serve the user and forwards the session request message of the UE to the determined S-CSCF (HSS can provide information regarding common features of S-CSCF, **paragraph 0040**); if there is no S-CSCF stored in the HSS that has served the UE, the HSS will directly return to I-CSCF a response message comprising the S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE before I-CSCF determines an S-CSCF that has the capability to serve the UE and forwards the session request message of the UE to the determined S-CSCF (HSS can provide information regarding common features of S-CSCF, **paragraph 0040**).

3. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4, 6, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bajko (US 20040196796 A1) in view of Phan_An (US 20040185848 A1).

Regarding **claim 4**, Bajko discloses the method according to claim 3, wherein, if the information returned from the HSS comprises only the name of S-CSCF, said determining the S-CSCF that has the capability to serve the UE for I-CSCF further comprises: the I-CSCF using the S-CSCF in the returned information as the S-CSCF that has the capability to serve the user (paragraph **0047**); if the information returned from the HSS comprises only the S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE requesting registration, said determining the S-CSCF that has the capability to serve the UE for I-CSCF (I-CSCF request for registration from the S-CSCF based on the returned information by HSS, paragraph **0049**; to ensure that all registrations utilizing the same services, paragraph **0050**); if the information returned from the HSS comprises the name of S-CSCF and S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE requesting registration, said determining the S-CSCF that has the capability to serve the UE for I-CSCF further comprises: the I-CSCF verifying according to the returned name of S-CSCF whether the S-CSCF has the capability to meet the current service requirement of the UE, if yes, determining the returned S-CSCF is the S-CSCF that has the capability to serve the UE (HSS returns the S-CSCF name, **paragraph 0037**);

Bajko does not specifically teach that the I-CSCF selects a new S-CSCF that has the capability to meet the current service requirement of the UE according to the S-CSCF capability information set in the returned response message, and determining the newly-selected S-CSCF as the S-CSCF that has the capability to serve the UE, selecting a new S-CSCF that has the capability to meet the current service

demand of the UE according to the S-CSCF capability information set in the response message, and determining the newly-selected S-CSCF is the S-CSCF that has the capability to serve the UE.

However, the preceding limitation is known in the art of communication. The second reference, Phan_Anhan teaches that the I-CSCF may recognizes that the first control entity is not the right entity where the new public ID of the user shall be registered at or the control entity may not be available; thus, the I-CSCF may select the second control entity (determines and chooses a new control entity (S-CSCF), **paragraph 0039 and 0052**). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the technique taught by Phan-Anh within the system of Bajko to allow the interrogating control entity (I-CSCF) to select the control entity (S-CSCF) that contains the needed information or profile to enable a subscriber to re-register to the network. In a 3G network for instance, a mobile user register in a S-CSCF during registration and authentication phase; if the registration fails, the I-CSCF selects a new S-CSCF which contain the phone profile that has been change in the HSS, which the current S-CSCF may not have the capability.

Regarding **claim 6**, Bajko discloses the method according to claim 2, wherein, when a Public User Identity performs registration for the first time, the message received by the HSS from the I-CSCF for inquiring the information of S-CSCF (**paragraph 0033**).

Bajko does not teach the information of S-CSCF is carried by a Cx-Query message; and said inquiry response message returned to the I-CSCF from the HSS further comprises the information needed for determining an S-CSCF is carried by a Cx-Query Resp message, or, the message received by the HSS from the I-CSCF for inquiring the information of S-CSCF is carried by a Cx-Select-pull message; said inquiry response message returned to the I-CSCF from the HSS further comprises the information needed for determining an S-CSCF is carried by a Cx-Select-pull Resp message.

However, the preceding limitation is known in the art of communication. The second reference, Phan_Anhan teaches that a Cx is an interface between the HSS and the newly selected S-CSCF and the

information is transferred on a Cx from one S-CSCF to another S-CSCF (paragraph **0036 and 0038**). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the technique taught by Phan-Anh within the system of Bajko to have a process where data is transfer from the HSS and S-CSCF via an Cx interface. It is common in a wireless network for S-CSCF to send the Cx-pull information (subscriber identity) to the HSS in order to be download relevant information from the subscriber profile to the S-CSCF.

Regarding **claim 8**, Bajko teaches the method according to claim 2, wherein, when the UE is in a session, the message received by the HSS from the I-CSCF for inquiring about the information of S-CSCF (**paragraph 0033**).

Bajko does not teach the information of S-CSCF is carried by a Cx-Location-Query message; and said inquiry response message returned to I-CSCF from HSS further comprises the information needed for determining an S-CSCF is carried by a Cx-Location-Query Resp message, or, the message received by the HSS from the I-CSCF for inquiring about the information of S-CSCF is carried by a Cx-Select-Pull message; and said inquiry response message returned to the I-CSCF from the HSS further comprises the information needed for determining an S-CSCF is carried by a Cx-Select-Pull Resp message.

However, the preceding limitation is known in the art of communication. The second reference, Phan_Anh teaches that a Cx is an interface between the HSS and the newly selected S-CSCF and the information is transferred on a Cx from one S-CSCF to another S-CSCF (paragraph **0036 and 0038**). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the technique taught by Phan-Anh within the system of Bajko to have a process where data is transfer from the HSS and S-CSCF via an Cx interface. It is common in a wireless network for S-CSCF to send the Cx-pull information (subscriber identity) to the HSS in order to be download relevant information from the subscriber profile to the S-CSCF.

Regarding **claim 13**, Bajko discloses the method according to claim 12, wherein, if the information returned from the HSS comprises only the name of S-CSCF, said determining the S-CSCF that has the capability to serve the UE for I-CSCF further comprises: the I-CSCF determining the S-CSCF in the returned information is the S-CSCF that has the capability to serve the UE (I-CSCF initiates user registration status query, **paragraph 0038**); if the information returned from the HSS comprises the name of S-CSCF and S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE requesting registration, then said determining the S-CSCF that has the capability to serve the UE for I-CSCF further comprises: the I-CSCF deciding according to the returned name of S-CSCF whether the S-CSCF has the capability to meet the current service requirement of the UE, if yes, determining the S-CSCF in the returned information is the S-CSCF that has the capability to serve the UE, otherwise, selecting a new S-CSCF that has the capability to meet the current service requirement of the UE according to the S-CSCF capability information set in the response message, and determining the newly-selected S-CSCF as the S-CSCF that has the capability to serve the user (I-CSCF allocates the public identities of the subscription (i.e., registration info of UE), **paragraph 0042**)..

Bajko fails to teach that the information returned from the HSS comprises only the S-CSCF capability information set that has the capability to meet the most strict service subscription requirement of the UE requesting registration, then said determining the S-CSCF that has the capability to serve the UE for I-CSCF further comprises: the I-CSCF selecting a new S-CSCF that has the capability to meet the current service requirement of the UE according to the S-CSCF capability information set in the returned response message, and determining the newly-selected S-CSCF as the S-CSCF that has the capability to serve the UE.

However, the preceding limitation is known in the art of communication. The second reference, Phan_An teaches that the I-CSCF determines and chooses a new control entity (S-CSCF), (**paragraph 0039 and 0052**). Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to implement the technique taught by Phan-Anh within the system of Bajko to allow the interrogating control entity (I-CSCF) to select the control entity (S-CSCF) that contains the needed information or profile to enable a subscriber to re-register to the network. In a 3G network for instance, a mobile user register in a S-CSCF during registration and authentication phase; if the registration fails, the I-CSCF selects a new S-CSCF which contain the phone profile that has been change in the HSS, which the current S-CSCF may not have the capability.

5. Claim 9, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bajko (US 20040196796 A1) in view of Flykt (US 7366303 B2).

Regarding **claim 9**, Bajko discloses the method according to claim 1, wherein, the request message comprising the request for storing the name of the S-CSCF (HSS maintain the name of S-CSCF, paragraph **0036**).

Bajko does not teach downloading the user's subscription information is carried by a Cx-Put message said response message returned to S-CSCF by HSS is carried by a Cx-Put Resp message, or, the request message comprising the request for storing the name of the S-CSCF and for downloading the user's subscription information is carried by a Cx-Pull message, and said response message returned to the S-CSCF by the HSS is carried by a Cx-Pull Resp message.

However, the preceding limitation is known in the art of communication. The second reference, Flykt teaches that Cx-Put informs the S-CSCF name to the HSS and Cx-Pull download subscriber profile to S-CSCF (**column 9 lines 25-28**). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the technique taught by Flykt within the system of Bajko to have a process where Cx-Put is used for providing HSS information about S-CSCF and Cx-Pull is used

for downloading messages. It is common in a wireless network for S-CSCF to send the Cx-pull information (subscriber identity) to the HSS in order to be download relevant information from the subscriber profile via Cx-Pull to the S-CSCF.

Regardind **claim 15**, Bajko discloses the method according to claim 11, wherein, when a public user identifier performs registration for the first time, the message received by the HSS from the I-CSCF for inquiring about the information of S-CSCF (queried by the control entities, paragraph **0035**).

Bajko fails to teach that the information of S-CSCF is carried by a Cx-Query message; and said inquiry response message returned to the I-CSCF from the HSS comprises the information needed for determining an S-CSCF is carried by a Cx-Query Resp message, or, the message received by the HSS from the I-CSCF for inquiring about the information of S-CSCF is carried by a Cx-Select-Pull message, and said inquiry response message returned to the I-CSCF from the HSS comprises the information needed for determining an S-CSCF is carried by a Cx-Select-Pull Resp message.

However, the preceding limitation is known in the art of communication. The second reference, Flykt teaches that Cx-Put informs the S-CSCF name to the HSS and Cx-Pull download subscriber profile to S-CSCF (**column 9 lines 25-28**). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the technique taught by Flykt within the system of Bajko to have a process where Cx-Put is used for providing HSS information about S-CSCF and Cx-Pull is used for downloading messages. It is common in a wireless network for S-CSCF to send the Cx-pull information (subscriber identity) to the HSS in order to be download relevant information from the subscriber profile via Cx-Pull to the S-CSCF.

Regarding claim 17, Bajko discloses the method according to claim 11, wherein, when the UE is in a session, the message received by the HSS from the I-CSCF for inquiring about the information of S-CSCF (paragraph **0047**).

Bajko fails to teach that the information of S-CSCF is carried by a Cx-Location-Query message, and said inquiry response message returned to the I-CSCF from the HSS comprises the information needed for determining an S-CSCF is carried by a Cx-Location-Query Resp message, or, the message received by the HSS from the I-CSCF for inquiring about the information of S-CSCF is carried by a Cx-Select-Pull message, and said inquiry response message returned to the I-CSCF from the HSS comprises the information needed for determining an S-CSCF is carried by a Cx-Select-Pull Resp message.

However, the preceding limitation is known in the art of communication. The second reference, Flykt teaches that Cx-Put informs the S-CSCF name to the HSS and Cx-Pull download subscriber profile to S-CSCF (**column 9 lines 25-28**). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the technique taught by Flykt within the system of Bajko to have a process where Cx-Put is used for providing HSS information about S-CSCF and Cx-Pull is used for downloading messages. It is common in a wireless network for S-CSCF to send the Cx-pull information (subscriber identity) to the HSS in order to be download relevant information from the subscriber profile via Cx-Pull to the S-CSCF.

6. Conclusion

The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure. Mayer (US 20050078642 A1), Aarnos (US 20040205241 A1), Tammi (US 20040203763 A1), and Huotari (US 20040184452 A1) also disclose methods of network registrations. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chhean Thao whose telephone number is 571-270-7497. The examiner can normally be reached on Monday-Friday 8:00 AM-5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis G. West can be reached on 571-272-7859. The fax phone number for the organization where this application

or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/CHHEAN THAO/

Examiner, Art Unit 4172

/Lewis G. West/

Supervisory Patent Examiner, Art Unit 4172